

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRADLEY D. CRAIG and ZAYN BILKADI

Appeal No. 2003-1681
Application No. 09/320,780

ON BRIEF

Before GARRIS, TIMM and POTEATE, Administrative Patent Judges.
POTEATE, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-23 and 27, which are all of the claims pending in the application.

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Claim 1 is representative of the subject matter on appeal
and is reproduced below:

1. A water-borne ceramer composition capable of being
cured to form an abrasion resistant, electrically
conductive ceramer, said ceramer composition
comprising:

water having dispersed or dissolved therein:

a silica sol comprising a plurality of
colloidal silica particles;

a binder precursor; and

an electrically conductive organic polymer.

The references relied upon by the examiner are:

Quintens et al. (Quintens)	5,354,613	Oct. 11, 1994
Quintens et al. (Quintens '924)	5,372,924	Dec. 13, 1994
Otsuka et al. (Otsuka)	5,432,237	Jul. 11, 1995
Ashton et al. (Ashton)	5,530,064	Jun. 25, 1996
Kaijou	5,651,921	Jul. 29, 1997
Majumdar et al. (Majumdar)	5,869,227	Feb. 09, 1999 (filed Dec. 18, 1997)
Majumdar et al. (Majumdar '083)	6,124,083	Sep. 26, 2000 (filed Oct. 15, 1998)

Grounds of Rejection

1. Claims 1-4, 9, 10, 12-17 and 19-21 stand rejected under 35 U.S.C. § 103 as unpatentable over Quintens in view of Otsuka and Kaijou.

2. Claim 11 stands rejected under 35 U.S.C. § 103 as unpatentable over Quintens in view of Otsuka and Kaijou and further in view of Quintens '924.

3. Claims 5-8 stand rejected under 35 U.S.C. § 103 as unpatentable over Quintens in view of Otsuka and Kaijou and further in view of Ashton.

4. Claim 18 stands rejected under 35 U.S.C. § 103 as unpatentable over Quintens in view of Otsuka and Kaijou and further in view of Majumdar.

5. Claims 22 and 23 stand rejected under 35 U.S.C. § 103 as unpatentable over Quintens in view of Otsuka and Kaijou and further in view of Majumdar '083.

6. Claim 27 stands rejected under 35 U.S.C. § 103 as unpatentable over Quintens in view of Otsuka and Ashton.

We affirm as to all six grounds of rejections.

Background

The invention relates to a water-borne ceramer composition which may be cured to form an abrasive resistant, electrically conductive ceramer. Claim 1. The composition of the invention comprises water having dispersed or dissolved therein (1) a silica sol comprising a plurality of colloidal silica particles, (2) a binder precursor and (3) an electrically conductive organic

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polymer. Id. The invention also relates to a method of preparing a water-borne ceramer composition. Claim 27.

According to appellants, the compositions of the invention exhibit low static charge dissipation times and, therefore, perform well as anti-static coatings. Appeal brief, paper no. 15, received October 22, 2002, page 2, last paragraph. In addition, the compositions of the invention are able to withstand substantial abrasion. Id.

Discussion

The examiner found that Quintens discloses the invention as claimed in claim 1 with the exception of a "binder precursor" or colloidal silica in the form of a silica sol. Examiner's answer, paper no. 16, mailed January 16, 2003¹, page 4, third paragraph. In particular, the examiner found that Quintens discloses an anti-static coating comprising a polythiophene polymer in the presence of a polymeric polyanionic compound along with a dispersion of a hydrophobic polymer, the polymers being dispersed in an aqueous medium. Final rejection, paper no. 9, mailed May 30, 2001, page 2, last paragraph. Quintens teaches that examples

¹ The examiner's answer was incorrectly stamped as mailed on January 15, 2002.

of suitable polymeric polyanion compounds are polymers containing repeating units which may be methacrylate esters. Column 5, lines 18-22. Quintens also teaches that suitable hydrophobic organic polymers may be homopolymers or copolymers made of polymerizable monomers selected from alkyl acrylates, preferably methyl methacrylate. Column 5, lines 64 - column 6, line 3.

According to the examiner, "[t]he polythiophenes disclosed by Quintens '613 are considered to be electrically conductive polymers. . . . [T]he polymeric polyanion compounds and/or the dispersion of hydrophobic polymer can be considered as the binder." Final rejection, page 3, first paragraph. The examiner further notes that Quintens' coating composition may contain matting agents and/or friction lowering substances such as colloidal silica. Id., paragraph bridging pages 2-3 (referencing Quintens, column 6, lines 57-60).

Otsuka discloses a radically polymerizable composition comprising an electrically conductive polymer and a radical polymerizable compound which are suitable for use as an electrostatic charge accumulation-preventing (antistatic) material. Id., third paragraph. The examiner views Otsuka's radical polymerizable compound as equivalent to the

claimed binder precursor since it is eventually cured to form a resin binder. Id., sentence bridging pages 3-4. Otsuka teaches that the radical polymerizable compound may be a (meth)acrylic ester compound such as methyl acrylate. See Otsuka, column 7, lines 36-51.

The examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the radical polymerizable compound of Otsuka as the precursor of either Quintens' polymeric polyanion compound or the hydrophobic polymer, the motivation being to increase the durability of Quintens' anti-static layer. See final rejection, page 4, second paragraph; Otsuka, column 7, lines 53-56. The examiner relies on Kaijou in support of his contention that it would have been obvious to have utilized colloidal silica particles in the form of a silica sol. Final rejection, page 4, paragraph 3. In particular, the examiner notes that the motivation for so doing would have been to optimize the solvent dispersion and stability of the colloidal silica.

Appellants argue that one of ordinary skill in the art simply would not have been motivated to look to either Otsuka or Kaijou since Quintens relates to a water-based composition, while

both Otsuka and Kaijou are directed to organic solvent-based compositions. See appeal brief, pages 5-6. In this regard, appellants note that "it is well understood that components useful in solvent-based systems may not necessarily perform or be compatible in a water-based system." Id., page 5.

Responsive to appellants arguments, the examiner points out that Quintens clearly teaches that organic solvents can be included within the aqueous dispersion for the purpose of improving coherence and film-forming capability. Examiner's answer, pages 4-5 (referencing Quintens, column 6, lines 32-56). Quintens teaches that

[s]uitable polymeric polyanion compounds for use in the presence of said polythiophenes prepared by oxidative polymerization are acidic polymers in free acid or neutralized form. . . .

. . . .

Instead of the free polymeric polyacids applied in conjunction with the polythiophenes it is possible to use mixtures of alkali salts of said polyacids and non-neutralized polyacids, optionally in the presence of monoacids.

Quintens, column 5, lines 14-17 and 47-51 (emphasis added). See examiner's answer, page 3, second paragraph. The examiner maintains that, "in order to determine the specific monoacids that may be used in [Quintens] composition, one skilled in the

art would have found motivation to look to teachings of similar compositions in the prior art, even if they were solvent-based systems." Id., page 5.²

Appellants do not refute these findings by the examiner. Moreover, appellants do not raise any additional arguments in response to the examiner's proposed motivation for combining the references beyond their contention that the secondary references are limited to organic solvent systems while the primary reference is limited to a water-based system.

Accordingly, we find that the examiner has established a prima facie case of obviousness with respect to claim 1 which appellants have failed to rebut. We also find that the examiner has established a prima facie case of obviousness with respect to claims 2-23 which depend from claim 1 as well as independent claim 27 for the reasons set forth in the final rejection. Appellants do not present any additional arguments with respect to these claims.³

The rejections of claims 1-23 and 27 are affirmed.

² We also note that Kaijou discloses a water repellant silica sol which can be dispersed homogeneously in non-polar organic solvents which include some of the same solvents utilized by Otsuka. Compare, Kaijou, column 3, lines 42-45 with Otsuka, column 3, lines 65-68.

³ See appeal brief, page 3, paragraph (7) ("the claims stand or fall together").

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Time Period for Response

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
CATHERINE TIMM)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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LINDA R. POTEATE)	
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LRP/vsh

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